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# Summary

## Christian science. Dutch Roman Catholics and Calvinists about the sciences, 1880-1940

This dissertation is a study of the attitudes of Calvinists and Roman Catholics in the Netherlands to the natural sciences in the period 1880-1940. Following the leading figures in the debate at the time, I have focused on their ideal conceptions of science. These ideals of science were based on the continental concepts of *wetenschap* or *Wissenschaft*, and included the humanities. They were part of the wider ideologies developed by Calvinists and Roman Catholics to define their positions *vis à vis* the modern world: neo-Calvinism and neo-Thomism.

In chapter 1 three leading questions are formulated:

- What is the nature and the content of the neo-Calvinist and neo-Thomist ideal conceptions of science?
- How did Calvinist and Roman Catholic scientists relate to these ideals? How did they appropriate these ideals? What did they do with these ideals in the practice of science?
- How is the emergence and the detailed elaboration of these ideals to be understood in the context of the changing culture, society and science of the period 1880-1940?

In this chapter I also sketch the long-term developments in the relation of natural science and religion. In the course of the nineteenth century, modern natural science had emerged as a specialist, professional activity, which was no longer primarily viewed as the study of God's creation and as legitimized by religious faith. Science and religion were supposed to remain separate and they were sometimes represented as inherently hostile to each other. These developments were connected with various changes in society in the course of the nineteenth century. With this reality and this ideological position Calvinists and Catholics confronted their ideal of science.

Chapter 2 is devoted to the ambitions of Dutch Calvinists and Roman Catholics in the decades around 1900. During this period far-reaching changes took place in the socio-political landscape of the country. The liberal, modern-protestant elite had dominated politics and society since the middle of the nineteenth century, but in the last decades of the century orthodox Protestants and Roman Catholics became more involved in politics and other areas of society. Following leaders like Abraham Kuyper and Herman Schaepman they created their own organisations and formulated their programmes for the future. The emergence of organisations

based on Calvinist or Roman Catholic principles was accompanied by the development of contemporary ideologies: neo-Calvinism and neo-Thomism. These were expected to provide solutions for various problems of modernity. At the same time they reinforced the identity of the group. As a result the political and social landscape of the country would in the end acquire the pluralistic structure that was later called ‘pillarization’.

Chapter 3 focuses on the activities of Calvinists and Catholics in the academic domain. The implications of the neo-Calvinist and the neo-Thomist conceptions of the university and of science, and the question of where they clashed with liberal views are further explored. The public debate about these divergent views flared up when Kuyper, as the responsible Minister, proposed an amendment of the Law on Higher Education that facilitated religious initiatives in science (the foundation of universities and professorships). The parliamentary debates of the years 1903–1905 are analysed in detail, because they clearly show the fundamental difference between the liberal and the religiously inspired conceptions of science. Special attention is paid to the political cooperation between Calvinists and Catholics, and the interaction between these two groups. This cooperation influenced the debate about faith, science and the foundation of their own universities.

In chapters 4 and 5 the views of the Calvinist and the Catholic leaders – A. Kuyper, W. Geesink, H. Bavinck and J. Woltjer on the one hand, and J.V. de Groot and J.Th. Beysens on the other – are discussed. These views defined the direction of the neo-Calvinist and the neo-Thomist approach to natural science. They provided as it were the practical agenda for scientists during the following decades. The neo-Calvinist and neo-Thomist ideals of science had important similarities, which distinguished them from the liberal view. They both opposed the view that science and religion are to be kept in separate compartments, or that there should be a conflict between the two. Both groups aimed at a (new) synthesis of science, philosophy and faith. This was actually to some extent a return to an older conception of science according to which the whole of reality was studied as God’s creation. In addition, neo-Calvinists and neo-Thomists were particularly opposed to what they called the ‘mechanist’ character of natural science, which, they felt, could not be reconciled with an organic, teleological conception of nature. In the context of this opposition they also voiced strong criticism of (Darwinist) evolutionary theory.

Despite this criticism, there was a positive appreciation of current science as well. Many of the achievements of science could be accepted once they had been set free from the incorrect, mechanist worldview. In addition there were positive developments in the sciences of the time. The period of the greatest overestimation of science had passed, it was felt. Even the ‘mechanist’ theory of Darwinism had few adherents around 1900. Instead neovitalism was gaining ground within biology and there were positive developments in physics. Dissatisfaction with the fragmented and mechanist science of the nineteenth-century was widespread and the critique of neo-Calvinists and neo-Thomists was in line with this cultural undercurrent.

The following chapters are devoted to the confrontation of this programme with the practice of science. In chapter 6 I examine the views of Calvinist and Catholic students at the state universities who were members of the *Societas Studiosorum Reformatorum* (SSR) or one of the Catholic student societies. The following two chapters focus on the views of Calvinist and Catholic natural scientists in the period up to 1940. These scientists had to put the ideal into practice. I therefore extensively discuss their deliberations, the choices they made and their disagreements. In chapter 7 this is done by examining the history of the 'Christian Society of Physicists and Physicians' (Christelijke Vereniging van Natuur- en Geneeskundigen in Nederland, CVNG), founded in 1896. In chapter 8 its Catholic counterpart, the 'Society for the Advancement of Science among Catholics in the Netherlands', founded in 1904, is reviewed. Both the student societies and the societies for Calvinist and Catholic scientists had their own histories and their own aims, but they were part of the Calvinist and Catholic networks of organisations. Neo-Calvinism and neo-Thomism became the dominant frameworks of debate. Both students and scientists sometimes had their reservations about the lofty ideals, but it is clear that during the entire period they nonetheless attempted to implement the ideals in one way or another.

At its inception the CNVG wanted to adopt an independent stance in the scientific world. Its aim was to practise science and medicine 'in the light of God's Word'. In the early period the debates in the society were dominated by critiques of the 'mechanist' character of science. Prominent members like S.R. Hermans, L. Bouman, Rijk Kramer and F.J.J. Buytendijk did this each in his own way, which occasionally led to fierce clashes. They were influenced in particular by the views about the Christian science of Bavinck. In line with his ideas they tried to develop their own views concerning questions about life, evolution, and the relation between the Bible and the results of science.

From the 1920s on the scientists had to deal with a new generation of theologians, who had a novel interpretation of the ideal of 'Christian science'. In particular after the Geelkerken controversy (1926) theologians like V. Hepp and G.Ch. Aalders appeared to link 'Christian natural science' more closely with the Genesis account of the creation than had been done before. They were inspired in this approach by the creationist movement, in particular the so-called 'flood geology' which at the time was emerging in the United States. This novel twist to the idea of a Christian science only concerned disciplines like geology and evolutionary biology, but it implied that all kinds of previously accepted results of science had to be rejected. This meant that, although there had been intense discussions for several decades, the debate about science and religion in Calvinist circles was to come to a standstill. W.J.A. Schouten attempted to make a stand against the theologians, but his voice and those of Bouman, Buytendijk and J.P. de Gaay Fortman were barely heeded in the end. These four men, and other scientists as well, were relegated to the margins or left the Calvinist fold altogether. Within the circle of scientists there were some who tried to revivify the old ideals in the thirties, amongst them J.H. Diemer, who was inspired by Herman Dooyeweerd's Philosophy of the Cosmonomic Idea (*wijsbegeerte der wetsidee*), and in a differ-

ent way G.J. Sizoo. Clearly, in the area of natural science, neo-Calvinism had become an apple of discord instead of a shared ideal.

The Catholic Scientific Society (*Katholieke Wetenschappelijke Vereeniging*, *kwv*), as the official name was sometimes abbreviated, developed from an association that aimed at the advancement of science in the Catholic community in the Netherlands into a platform where Catholic scientists reflected on the relation of science and religion. Neo-Thomist philosophy provided the intellectual framework for these discussions. It also determined what elements in contemporary science could and what elements couldn't be accepted. However, not everybody interpreted neo-Thomism in the same way. This was apparent during the fierce discussion about evolutionary theory provoked by the views of the biologist A.C.J. van Goor around 1920. Appealing to Beysens and the Louvain geologist H. de Dorlodot, Van Goor gave a Thomist justification of his largely accepting the theory of descent. This was a bridge too far for most. They rather advanced Thomism in their opposition against evolutionary theory.

Even so neo-Thomism was not experienced as a constraint within the Society. Prominent members like J.A.J. Barge and P. Hoenen campaigned for a synthesis of philosophy and science. In this endeavour the philosophy of Thomas Aquinas could provide a roadmap when science was in crisis or even had been declared bankrupt. A number of thorough philosophical studies of biological and physical topics were published, which convinced many Catholic scientists of the significance of neo-Thomism for the sciences. Precisely this philosophy seemed suited to provide the new synthesis that was needed in biology and physics. During the interbellum period many were inspired by the idea of a rechristianisation and catholicisation of cultural life and they also expected a new synthesis of Thomism and science.

In chapter 9 a comparative analysis is given of the Calvinist and Catholic ideals, and an explanation of the developments is attempted. Some links with the present are indicated. Around 1900 Calvinists and Catholics had together attacked the liberal, secular conception of science. They wanted to create their own forms of modernity and they claimed a space to create their own science. After a few decades, however, the two groups seemed to become self-absorbed and satisfied with their sense of being on the right track. The debate in Calvinist circles developed its own dynamics, the neo-Calvinist ideal of a Christian science causing division. In Catholic circles on the other hand, neo-Thomist philosophy provided unity, and there the spirit during the interbellum period was actually rather triumphalist.

On the other hand there were parallels in the ways the two groups tried to establish links between modern science and their own ideologies. Some Calvinist scientists held on to the original neo-Calvinist ideal of science. An important reason for this tenacity was that it seemed to offer possibilities for linking up with developments in science. Science was moving again in the direction of religion, they felt. To some extent this may have been wishful thinking, but there had been genuine signs of a transformation in the sciences. Since the 1890s, and particularly during the interbellum period, growing numbers of intellectuals reacted against

‘nineteenth-century science’, which allegedly had suffered from all kinds of shortcomings. This offered Calvinists and Catholics the option of believing that they hadn’t surrendered to science in its naturalist form. After all, the character of science had changed as well. The revolution in physics and various developments in the life sciences were viewed as an opportunity to establish links between their own ideal of science and current science.

After World War II the discussions of the pre-war period were continued. Among Catholic scientists neo-Thomism remained the generally accepted framework of the debates. Within this context the philosopher A.G.M. van Melsen managed to create more openness towards other philosophical movements and to enlarge the latitude for debate within neo-Thomism. In the 1950s there was for some time a new élan in Calvinist circles around the Free University professors J. Lever and J.R. van de Fliert. The dialogue with the theologians was initially difficult and among the Calvinist rank and file there was resistance against the broad interpretation of the original ideals advocated by Lever and Van de Fliert.

The wider ambition and hope for a new synthesis between science and religion, linked to vitalist, holist and indeterminist developments in biology and physics, actually petered out fairly quickly. Many felt that science had become less ideological. The pre-war ideals were viewed as overambitious, erroneous or simply irrelevant. As a result the majority of Calvinists by and large accepted the developments in the sciences. From now on the ‘traditional’ positions were only defended by minorities, and in the debate the actual practice of science was increasingly ignored. In this way the creationist views that had been embraced by Calvinist theologians in the thirties, re-emerged among orthodox Protestants and differences of opinion became ever more confrontational. In Catholic circles a conciliatory stance about science and religion was increasingly adopted. Since then the popular image of ‘the’ protestant and ‘the’ Catholic views of science have been coloured to a large extent by these relatively recent developments. The debates in the period 1880-1940, however, can be properly understood only within the historical framework offered by this study.